

09/893,829MS174293.01/MSFTP243US**REMARKS**

Claims 1-8, 10-15, 17-24 and 26-27 are currently pending in the subject application and are presently under consideration. Claims 1, 10, 14, 15, 17, 23, 24, and 27 have been amended to further emphasize various aspects of applicants' claimed subject matter, and claims 9 and 16 have been cancelled herein without prejudice or disclaimer. A version of all pending claims is presented on pages 4-10 of this Reply. In addition, the specification has been amended as indicated on pages 2-3. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

I. Rejection of Claim 14 Under 35 U.S.C. §101

Claim 14 stands rejected under 35 U.S.C. §101 because it is alleged that the claimed invention is directed to non-statutory subject matter. This rejection should be withdrawn for at least the following reasons. The language in the specification to which the Examiner takes exception has been amended herein to remove the perceived ambiguity. Accordingly, withdrawal of this rejection is requested.

II. Rejection of Claim 23 Under 35 U.S.C. §101

Claim 23 stands rejected under 35 U.S.C. §101 because it is alleged that the claimed invention is directed to non-statutory subject matter. Withdrawal of this rejection is requested for at least the following reasons. The language in the specification has been amended herein to remedy the purported ambiguity identified by the Examiner. Accordingly, this rejection is moot and withdrawal of the rejection is respectfully requested.

III. Rejection of Claims 1-24, 26, and 27 Under 35 U.S.C. §103(a)

Claims 1-24, 26, and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cohen *et al.* (US 6,324,543) in view of Cheng *et al.* (US 6,182,155). This rejection should be withdrawn for at least the following reasons. Cohen *et al.* and Cheng *et al.*, either alone or in combination, fail to teach or suggest each and every aspect set forth in the subject claims.

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To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) *must teach or suggest all the claim limitations*. See MPEP §706.02(j). The *teaching or suggestion to make the claimed combination* and the reasonable expectation of success *must be found in the prior art and not based on the Applicant's disclosure*. See *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (emphasis added).

Independent Claims 1, 14, 15, 23 and 27

Applicants' claimed subject matter relates to a system and method for interacting with an object where the system and method facilitate application developers creating proxies, accessing method call interception functionality, retrieving information associated with a method call that can be intercepted by the interception functionality and adapting and/or extending the functionality of object systems. Thus, object systems become more adaptable and/or extensible and inflexibility problems associated with conventional systems are mitigated. In particular, independent claims 1, 14, 15, 23 and 27, as amended recite similar features, namely: *the application code generic proxy performs proxy pre-processing that includes machine learning to optimize remote method call invocation before invoking the method on the object*. Cohen *et al.* and Cheng *et al.*, either alone or in combination, do not teach or suggest these aspects of the claimed subject matter.

Cohen *et al.* discloses a method and system that allows a program to become dynamically reconfigurable without programmer intervention, *i.e.*, the programs can be dynamically distributed among multiple computers within a computer network without modification to the source code of the programs running on the system. However, the cited documents does not disclose the fact that the application code generic proxy can perform proxy pre-processing wherein machine learning facilities are utilized in

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optimizing remote method call invocation prior to the invocation of the method on the object. Cohen *et al.* is silent in this regard. The claimed subject matter in contrast employs an application code generic proxy to perform proxy pre-processing that includes using machine-learning techniques to optimize remote method call invocation before invoking the method on the object. Utilization of such machine learning techniques allows the claimed subject matter to dynamically learn and adapt to changing circumstances that affect remote method call invocation.

The Examiner further concedes that Cohen *et al.* does not disclose modifying the method call operability of the application code generic proxy and thus offers Cheng *et al.* to rectify this deficiency. Cheng *et al.* relates to a mechanism for transparently issuing remote and local cross-language, and local same-language calls from an object oriented environment. However, the secondary document, like the primary document, does not teach or suggest the utilization of the application code generic proxy to perform proxy pre-processing that includes machine learning involved in optimizing remote method call invocation before invoking the method on the object. Thus it is submitted that the cited documents and applicants' claimed subject matter are clearly distinguishable. Accordingly, withdrawal of the rejection of independent claims 1, 14, 15, 23 and 27 (and associated dependent claims) is requested.

Independent Claim 24

Independent claim 24, as amended, recites: *an intercepted method call on an object comprises a method name, one or more input parameters, a count of the number of parameters input to the method, one or more type identifiers associated with the input parameters, a count of the number of return parameters for the method, one or more type identifiers associated with the return parameters, class/interface defining method data, a stack pointer and a heap pointer.* Cohen *et al.* and Cheng *et al.* fail to teach or suggest these exemplary features.

As stated *supra*, Cohen *et al.* provides a method and system that allows a program to become dynamically reconfigurable without programmer intervention, and Cheng *et al.* discloses a mechanism for transparently issuing remote and local cross-language, and local same-language calls from an object oriented environment. However, the cited

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documents do not provide that an intercepted method call can comprise a method name, one or more input parameters, a count of the number of parameters input to the method, the type of identifiers associated with the input parameters, a count of the number of returned parameters, a stack pointer and a heap pointer. The claimed subject matter in contrast utilizes a data packet that comprises one or more identifier/value pairs wherein the value provides information associated with an intercepted method call on an object. The information so associated with the intercepted method call such as the method name, one or more input parameters, a count of the number of parameters input to the method, the type of identifiers associated with the input parameters, a count of the number of returned parameters, a stack pointer and a heap pointer are utilized to facilitate access to an remoting and/or intercepting infrastructure. Consequently, in view of the silence of both documents in the regard the rejection of independent claim 24 (and associated dependent claims) should be withdrawn.

IV. Rejection of Claims 1, 14, 15, 23, 24, and 27 Under 35 U.S.C. §103(a)

Claims 1, 14, 15, 23, 24, and 27 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Moore *et al.* (US 6,262,581) in view of Cheng *et al.* Withdrawal of this rejection is requested for at least the following reasons. Moore *et al.* and Cheng *et al.*, either individually and/or in combination, do not teach or suggest all aspects set forth in the subject claims.

Independent Claims 1, 14, 15, 23, and 27

As stated above, independent claims 1, 14, 15, 23 and 27 recite: *the application code generic proxy performs proxy pre-processing that includes machine learning to optimize remote method call invocation before invoking the method on the object.* Moore *et al.* and Cheng *et al.* individually and/or in combination, do not disclose these salient aspects of the claimed subject matter.

Moore *et al.* relates to a communications framework operable to support remote mode invocation in a distributed object environment. However, the cited document does not disclose or suggest the functionality of an application code generic proxy that performs proxy pre-processing that include using machine learning to optimize remote

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method call invocation before invoking the method on the object. Nowhere in Moore is this pertinent aspect of applicants' claimed subject matter taught or suggested.

Moreover, the Examiner acknowledges that Moore *et al.* is deficient in failing to provide the method call operability of the application code generic proxy and thus offers Cheng *et al.* to remedy this deficiency. As stated *supra*, Cheng *et al.* discloses a mechanism for transparently issuing remote and local cross-language, and local same-language calls from an object oriented environment. However, the secondary document does not teach or suggest the utilization of the application code generic proxy to perform proxy pre-processing that includes machine learning involved in optimizing remote method call invocation before invoking the method on the object. Thus, since neither the primary nor the secondary document provide for the exemplary aspects recited in the subject claims withdrawal of the rejection with respect to these claims is respectfully requested.

Independent Claim 24

Independent claim 24, as amended, recites: *an intercepted method call on an object comprises a method name, one or more input parameters, a count of the number of parameters input to the method, one or more type identifiers associated with the input parameters, a count of the number of return parameters for the method, one or more type identifiers associated with the return parameters, class/interface defining method data, a stack pointer and a heap pointer.* Moore *et al.* and Cheng *et al.*, alone or in combination, do not teach or suggest these exemplary aspects of applicants' claimed subject matter.

As stated above, Moore *et al.* relates to a communications framework operable to support remote mode invocation in a distributed object environment, and Cheng *et al.* provides a mechanism for transparently issuing remote and local cross-language, and local same-language calls from an object oriented environment. The cited documents do not however provide for a data packet that is employed to facilitate access to remoting and/or intercepting infrastructure wherein an intercepted method call includes associated information relating to a method name, one or more input parameters, a count of the number of parameters input to the method, one or more type identifiers associated with

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the input parameters, a count of the number of return parameters for the method, one or more type identifiers associated with the return parameters, class/interface defining method data, a stack pointer and a heap pointer. Nowhere in the disclosures of either Moore *et al.* or Cheng *et al.* is it taught or suggest that information associated with an intercepted method can include the plurality set forth in the subject claim. Accordingly, withdrawal of this rejection with respect to independent claim 24 is requested.

CONCLUSION

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [MSFTP243US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicants' undersigned representative at the telephone number below.

Respectfully submitted,

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